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EDF RENEWABLES IRELAND LTD

KELLYSTOWN WIND FARM

COUNTY LOUTH

TRAFFIC AND TRANSPORT ASSESSMENT

November 2024

Job No. 6918



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KELLYSTOWN WIND FARM
TRAFFIC AND TRANSPORT ASSESSMENT

CONTENTS

RECEIVED: 04/12/2024
 Planning Department - Viewing Purposes Only

1 INTRODUCTION..... 1

1.1 Brief..... 1

1.2 Statement of Authority 1

1.3 Design References / Standards..... 1

1.4 Methodology..... 2

1.5 Consultation With Local authority..... 3

1.6 Site Location, Context and Proposed Development 3

2 EXISTING PUBLIC ROAD NETWORK AND TRAFFIC 5

2.1 Existing Traffic Volumes 5

2.2 Access to the Proposed Development..... 7

2.3 Existing Roads in the Vicinity of the Site.....11

2.4 Existing Junctions in the Vicinity of the Site13

2.5 Accident Data.....14

2.6 Parking Facilities14

3 TRAFFIC GENERATION AND TRIP DISTRIBUTION 14

3.1 Trip Generation associated with the Proposed Development.....14

3.2 Traffic Distribution.....15

3.3 Future Traffic Growth on the Public Road Network15

4 TRAFFIC ANALYSIS..... 16

4.1 Traffic Analysis at the R132 / L6274/ L2254 Junction16

4.2 Traffic Analysis at the L2275 / L6274 Junction.....17

5 SUMMARY 20

Appendix A – Traffic Analysis - R132 / L6274 / L2254 Junction

Appendix B – Traffic Analysis – L2275 / L6274 Junction

1 INTRODUCTION

1.1 Brief

Jennings O'Donovan & Partners Limited has been appointed by EDF Renewables Ireland Ltd to prepare a Traffic and Transport Assessment ("TTA") for the proposed Kellystown Wind Farm, Co. Louth. The Kellystown Wind Farm Site is located in the townlands of Brittas, Brownstown, Cartanstown, Drumshallon, Gallstown, Groom, Kearneystown, Keeverstown, Piperstown, Rokeby, Stonehouse and Swinestown. Co. Louth. The development will consist of 5 wind turbines with a maximum overall ground to blade tip height of up to 180 metres. 38kV on-site substation, Permanent Met Mast, underground Grid Connection from the onsite 38kV substation to Drybridge 110kV Substation.

1.2 Statement of Authority

The Traffic and Transport Assessment has been prepared by John Doogan of Jennings O'Donovan & Partners Limited, Finisklin, Sligo. Established in Sligo in 1950, Jennings O'Donovan & Partners Limited is a Clean Tech Company providing consulting engineering services in the areas of road design, renewable energy, civil and structural engineering, water supply, wastewater collection and treatment, environmental resource management and impact assessment and in the area of industrial and commercial development.

1.3 Design References / Standards

The TTA for the Proposed Development has been based on the following technical documents:

- Louth County Council Development Plan.
- Transport Infrastructure Ireland publications:
 - PE-PDV-02045 Traffic and Transport Assessment Guidelines.
 - PE-PAG-02017 Travel Demand Projections.
 - PE-PAG-02039, Expansion Factors for Short Period Traffic Counts.
 - Spatial Planning and National Roads.
 - Design Manual for Roads and Bridges.
 - Specification for Road Works.
- Design Manual for Urban Roads and Streets - DMURS
- Junctions 9 Traffic Analysis Software.

1.4 Methodology

The methodology adopted for this Traffic and Transport Assessment involved:

A site visit was undertaken on Wednesday 26th October 2023 to record traffic volumes and turning movements of vehicles at the R132/L6274/L2254 junction and at the L6274/L2275 junction.

Traffic Counts were carried out between 7.45am and 11.00am in the morning.

A traffic analysis was carried out at the R132 / L6274 / L2254 junction and at the L6274 / L2275 junctions using the 2023 Existing traffic flows to determine if capacity problems exist at the junctions in the vicinity of the Proposed Development.

Future year traffic assessments were then carried out at the R132 / L6274 / L2254 and L6274 / L2275 junctions for the following scenarios to determine if capacity problems would arise at the junction with and without the Proposed Development in place.

2025 Projected traffic flows without the Proposed Development (Planning Approval)

2035 Projected traffic flows without the Proposed Development (Planning Period / Windfarm Construction)

2070 Projected traffic flows without the Proposed Development (Operations Period)

2035 Projected traffic flows with the Proposed Development (Wind Farm Construction Traffic)

2070 Projected traffic flows with the Proposed Development (Wind Farm Operations Traffic)

2070 Projected traffic flows with the Proposed Development (Wind Farm Decommissioning Traffic)

A traffic assessment was carried out with the Proposed Development under construction in 2035 with additional traffic from unrelated planned and consented developments to determine if capacity problems would arise at the junctions due to combined traffic volumes in the vicinity of the development.

Temporary traffic lights will be required for short periods on the R132 and L6274 for traffic management during the construction of the Proposed Development. A traffic analysis has been carried out to assess the impact of the temporary traffic lights on the R132 and L6274.

A traffic analysis has been carried out to assess the impact of projected traffic flows combined with peak construction traffic on L6274 existing accesses and local road junctions.

1.5 Consultation With Local authority

The design team for the Proposed Development held a pre planning meeting with representatives from Louth County Council roads department to discuss the project on 29th February 2024.

1.6 Site Location, Context and Proposed Development

Kellystown wind farm site is located to the east of the M1 motorway, approximately 9.3km to the north of Drogheda. The wind farm will have four site entrances points from the public road network, two access points from the L6274 local road and two access points from the L2275. The proposed wind farm will consist of 5 turbines with a maximum overall ground to blade tip height of up to 180 metres, 38kV substation, Meteorological Masts and underground grid connection from onsite 38kV substation to Drybridge 110kV Substation. Each turbine will be founded on a reinforced concrete foundation and will have a crane hardstand constructed from granular materials to accommodate cranes and store turbine components during turbine erection. Access to the turbines will be from two site entrances on the existing L2674 local road via a network of site roads constructed from granular materials. The L6274 access points will be constructed to accommodate the swept path and to withstand wheel loading from abnormal load vehicles delivering turbine components to the site. Access to the onsite 38kV substation and the met mast will be from two existing access points on the L2275. The turbines will be linked to the onsite 38kV substation by underground electrical and communications cabling. The wind farm will be linked to the National Grid by an underground grid connection constructed from the onsite 38kV substation to the existing Drybridge 110kV substation. The wind farm site will be drained by an integrated site drainage network consisting of clean and dirty water drainage systems. The Location and layout of the wind farm site is shown on **Figure 1**. The wind farm Grid Connection route is shown on **Figure 2**.



Figure 1 – Site Layout

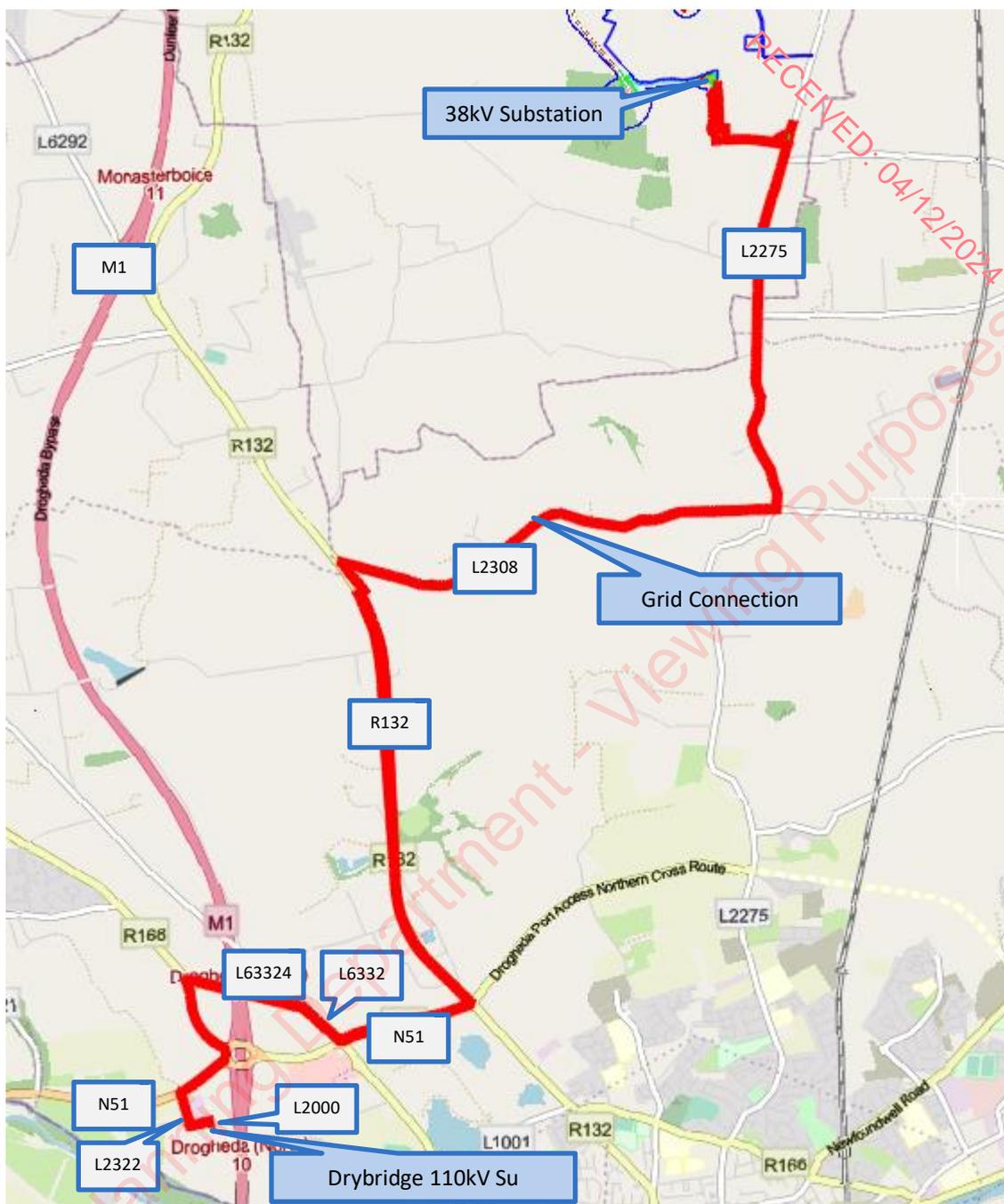


Figure 2 – Grid Connection Route

2 EXISTING PUBLIC ROAD NETWORK AND TRAFFIC

2.1 Existing Traffic Volumes

To assess the impact of the Proposed Development on the existing road network when the Proposed Development is constructed and fully occupied, baseline traffic volumes in the area are required.

Jennings O'Donovan carried out classified traffic counts Wednesday 26th October 2023 to record traffic volumes and turning movements of vehicles at the R132/L6274/L2254 junction and at the L6274/L2275 junction.

The recorded traffic flows at the R132/L6274/L2254 junction are summarised in **Table 1**. The recorded traffic flows at the L6274/L2275 junction are summarised in **Table 2**.

R132 / L6274 / L2254			
Time	LGV	HGV	Total Vehicles Through Junction
7.45am to 8.00am	68	8	76
8.00am to 8.15am	91	11	102
8.15am to 8.30am	84	9	93
8.30am to 8.45am	111	15	126
8.45am to 9.00am	90	14	104
9.00am to 9.15am	49	9	58
9.15am to 9.30am	55	9	64
9.30am to 9.45am	38	16	54
9.45am to 10.00am	34	12	46
10.00am to 10.15am	36	11	47
10.15am to 10.30am	38	5	43
10.30am to 10.45am	48	7	55
10.45am to 11.00am	44	12	56

Table 1 – R132/L6274/L2254 Junction Traffic Volumes

L6274 / L2275			
Time	LGV	HGV	Total Vehicles Through Junction
7.45am to 8.00am	34	4	38
8.00am to 8.15am	34	9	43
8.15am to 8.30am	48	7	55
8.30am to 8.45am	58	3	61
8.45am to 9.00am	47	7	54
9.00am to 9.15am	35	6	41
9.15am to 9.30am	25	2	27
9.30am to 9.45am	18	2	20
9.45am to 10.00am	18	5	23
10.00am to 10.15am	13	2	16
10.15am to 10.30am	14	3	17
10.30am to 10.45am	16	3	19
10.45am to 11.00am	16	5	21

Table 1 –L6274/L2275 Junction Traffic Volumes

The morning peak hour traffic period on the public road network in the vicinity of the Proposed Development is obtained from the traffic count data in **Table 1 and Table 2**. The Traffic data shows that peak traffic occurs between 8.00am and 9.00am in the morning. The peak hour period shown in **Table 3** is used to carry out capacity analysis for the development.

AM Peak Hour	8.00 – 9.00
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Table 3 –Peak Hour Traffic Period

2.2 Access to the Proposed Development

The location of the site entrances to the Proposed Development are shown on **Figure 1**. Site entrance No. 1 will be constructed on the L6274 local road. The site entrance will consist of a simple T-Junction with priority for L6274 traffic. The junction will be constructed to access Turbine T1 during the construction and operation of the wind farm. The junction will be constructed to accommodate HGV vehicles with an extended overrun area to accommodate the swept path and wheel loading from abnormal load vehicles delivering turbine components during the turbine erection phase of the project. During the construction wind farm infrastructure such as roads and hardstands, the overrun area at the junctions for abnormal load vehicles will not be in use and access to the overrun areas will be restricted using temporary traffic barriers. The temporary traffic barriers will be used to channelise traffic at the junctions and to prevent parking in the vicinity of the L6274. The overrun area at the junction will be reinstated following the delivery of turbine components. The site entrance junction will have a dwell area with a gradient of -2.5% at its intersection with the L6274 with drainage falling towards the wind farm site and away from the L6274 carriageway. The site entrance junction will be gated and fenced with stock proof fencing during the construction period, the access gates will be set back 20m from the L6274 carriageway edge to accommodate HGV vehicles entering the wind farm site and to eliminate the possibility of vehicles blocking the L6274. Wheel cleaning facilities will be provided at site access junctions to prevent the spread of mud and debris onto the L6274 carriageway. The Layout of site entrance No.1 is shown on **Figure 3**. Visibility at the junction will be in accordance with Louth County Council Development Plan, Table 13.13 for a non-domestic development on a local road and will have visibility splays of 75m measured from a 4.5m setback.



Figure 3 – Site Entrance No. 1

Site entrance No. 2 will be constructed on the L6274 local road. The site entrance will consist of a simple T-Junction with priority for L6274 traffic. The junction will be constructed to access Turbines T2, T3, T4 and T5 during the construction and operation of the wind farm. The junction will be constructed to accommodate HGV vehicles with an extended overrun area to accommodate the swept path and wheel loading from abnormal load vehicles delivering turbine components during the turbine erection phase of the project. During the construction wind farm infrastructure such as roads and hardstands, the overrun area at the junctions for abnormal load vehicles will not be in use and access to the overrun areas will be restricted using temporary traffic barriers. The temporary traffic barriers will be used to channelise traffic at the junctions and to prevent parking in the vicinity of the L6274. The overrun area at the junction will be reinstated following the delivery of turbine components. The site entrance junction will have a dwell area with a gradient of -2.5% at its intersection with the L6274 with drainage falling towards the wind farm site and away from the L6274 carriageway. The site entrance junction will be gated and fenced with stock proof fencing during the construction period, the access gates will be set back 20m from the L6274 carriageway edge to accommodate HGV vehicles entering the wind farm site and to eliminate the possibility of vehicles blocking the L6274. Wheel cleaning facilities will be provided at site access junctions to prevent the spread of mud and debris onto the L6274 carriageway. The Layout of site entrance No.2 is shown on **Figure 4**. Visibility at the junction will be in accordance with Louth County Council Development Plan, Table 13.13 for a non-domestic development on a local road and will have visibility splays of 75m measured from a 4.5m setback.



Figure 4 – Site Entrance No. 2

Site entrance No. 3 is an existing priority access junction on the L2275 local road. The junction will be used during the construction and operation of the onsite 38kV substation. The existing access will be realigned to increase visibility splays at the junction. The Layout of site entrance No.3 is shown on **Figure 5**. Visibility at the junction will be in accordance with Louth County Council Development Plan, Table 13.13 for a non-domestic development on a local road with visibility splays of 75m measured from a 4.5m setback.



Figure 5 – Site Entrance No. 3

Site entrance No. 4 is an existing priority access junction on the L2275 local road. The junction will be used during the construction and operation of the permanent met mast. It is not proposed to modify the existing junction as part of the wind farm development. The Layout of site entrance No.4 is shown on **Figure 6**.



Figure 6 – Site Entrance No. 4

2.3 Existing Roads in the Vicinity of the Site

Site entrances No. 1 and No.2 are located on the L6274 local road (Reference Plate 1). The L6274 is a 6.0m wide single carriageway with grass verges. The L6274 runs between the R132 regional road and the L2275 local road and has an 80km/h speed limit classification. The L6274 is in good condition and will be the primary access road to the site during the construction of the wind farm. Existing traffic volumes on the L6274 were obtained from the classified traffic counts carried out by JOD on Wednesday 26th October 2023 at the R132 / L6274 junction. Using the methodology from TII publication PE-PAG-02039 to calculate annual average daily traffic (AADT) from short period traffic counts, the resulting AADT on the L6274 are calculated from the recorded traffic counts as follows. The L6274 local road has an AADT of 1,912 vehicles at its junction with the R132 which equates to a two-way traffic flow of approximately 142 vehicles during peak hour traffic periods with 3% HGV traffic.



Plate 1 – L6274 Local Road

Site entrance junction No. 3 and No. 4 are located on the L2275 local road (Reference Plate 2). The L2275 is a 5.0m wide single carriageway with grass verges and has an 80km/h speed limit classification. The L2275 runs between the R170 near the village of Grangebellew and the L6302. The L2275 is in good condition and will be used by wind farm construction and operations traffic to access the onsite 38kV substation and met mast. Existing traffic volumes on the L2275 were obtained from the classified traffic counts carried out by JOD on Wednesday 26th October 2023 at the L2275 / L6274 junction. Using the methodology from TII publication PE-PAG-02039 to calculate annual average daily traffic (AADT) from short period traffic counts, the resulting AADT on the L2275 is calculated from the recorded traffic counts as follows. The L2275 local road has

an AADT of 2,855 vehicles at its junction with the L6274 which equates to a two-way traffic flow of approximately 212 vehicles during peak hour traffic periods with 1.3% HGV traffic.



Plate 2 – L2275 Local Road

The R132 runs to the west of the wind farm site and links the site to the M1 motorway at junctions 11 and 12 (Reference Plate 3). The R132 is a 6.0m wide single carriageway with two lanes, hard strips and grass verges. Existing traffic volumes on the R132 were obtained from the classified traffic counts carried out by JOD on Wednesday 26th October 2023 at the R132 / L6274 junction. Using the methodology from TII publication PE-PAG-02039 to calculate annual average daily traffic (AADT) from short period traffic counts, the resulting AADT on the R132 is calculated from the recorded traffic counts as follows. The R132 local road has an AADT of 4,027 vehicles at its junction with the L6274 which equates to a two-way traffic flow of approximately 300 vehicles during peak hour traffic periods with 3% HGV traffic.



Plate 3 – R132 Regional Road

2.4 Existing Junctions in the Vicinity of the Site

The existing R132 / L6274/ L2254 (Reference Plate 4) is a staggered junction with priority for R132 traffic. The junction is signed and marked with regulatory and directional signage and roadmarkings. The junction is not lit by public lighting. Observations during the traffic counts and traffic analysis carried out at the R132 / L6274/ L2254 junction using the recorded traffic volumes show that there are no capacity problems at the junction under current traffic conditions. The results of the analysis are included in **Appendix A**.



Plate 4 – R132 / L6274 /L2254 Priority junction

The existing L2275 / L6274 (Reference Plate 5) is a simple junction with priority for L2275 traffic. The junction is signed and marked with regulatory and directional signage and roadmarkings. The junction is not lit by public lighting. Observations during the traffic counts and traffic analysis carried out at the L2275 / L6274 junction using the recorded traffic volumes show that there are no capacity problems at the junction under current traffic conditions. The results of the analysis are included in **Appendix A**.



Plate 5 – L2275 / L6274 Priority Junction

The existing L2275 / L6277 (Reference Plate 6) is a mini roundabout junction. The junction is signed and marked with regulatory and directional signage and roadmarkings. The junction is not lit by public lighting. Observations during the site visit carried out in October 2023 show that there are no capacity problems at the junction under current traffic conditions.



Plate 6 – L2275 / L6277 Mini Roundabout Junction

2.5 Accident Data

Mapped statistics for accident data in the area were not available from the RSA website in June 2023.

2.6 Parking Facilities

Parking facilities are provided within the wind farm site.

3 TRAFFIC GENERATION AND TRIP DISTRIBUTION

3.1 Trip Generation associated with the Proposed Development

During the construction of the wind farm, the maximum daily traffic generated by the development will occur during concrete pours for turbine foundations. The concrete pours will occur on five separate days during the 18 month construction period. During the concrete pours the wind farm development will generate 168 HGV trips and 40 LGV trips on the public road network. When concrete pours are not taking place on site, the development will generate a maximum 49 HGV trips and 30 LGV trips on a daily basis. The traffic profile for the development during turbine foundation concrete pours is shown in **Table 4**. Full details of the traffic generated by the Proposed Development is included in the project Traffic Management Plan.

Time	Arrivals		Departures	
	HGV	LGV	HGV	LGV
06.00 – 07.00		20		
07.00 – 08.00	20	15	20	
08.00 – 09.00	15	5	15	2
09.00 – 10.00	15		15	
10.00 – 11.00	15		15	
11.00 – 12.00	20		20	
12.00 – 13.00	15		15	
13.00 – 14.00	10	5	10	5
14.00 – 15.00	20		20	
15.00 – 16.00	15		15	
16.00 – 17.00	10		10	
17.00 – 18.00	8	2	8	5
18.00 – 19.00	5		5	15
19.00 – 20.00				20

Table 6 Development Traffic Profile

3.2 Traffic Distribution

For the purpose of analysis all traffic generated by the wind farm development will arrive and depart at the site entrances on the L6274 from the R132 / L6274 junction. Traffic associated with the construction of the 38kV onsite substation and grid connection works will pass through the L2275 / L6274 junction.

3.3 Future Traffic Growth on the Public Road Network

Traffic Infrastructure Ireland (TII) forecasts for future traffic growth on the public road network are published in PE-PAG-02017 “Travel Demand Projections”. The growth factors are applied to the 2023 baseline traffic flows to approximate the traffic flows on the public road network in the future when the development is granted planning in 2025, 10 year planning grant and construction in 2035 and a 35 year operational period and decommissioning in 2070. The growth factors for the relevant assessment years using the central-growth scenario for County Louth are shown in **Table 7**.

Year	LGV Growth Factor	HGV Growth Factor
2023	1.00	1.00

2025	1.05	1.11
2035	1.16	1.45
2070	1.46	2.85

Table 7 – Traffic Growth Factors for Public Roads

4 TRAFFIC ANALYSIS

4.1 Traffic Analysis at the R132 / L6274/ L2254 Junction

A traffic analysis of the proposed Kellystown Windfarm development has been carried out to determine if the junction will operate within capacity for the following scenarios;

- 2023 Baseline traffic counts
- 2025 Projected traffic flows without the Proposed Development (Planning Approval)
- 2035 Projected traffic flows without the Proposed Development (Planning Period / Windfarm Construction)
- 2070 Projected traffic flows without the Proposed Development (Operations Period)
- 2035 Projected traffic flows with the Proposed Development (Wind Farm Construction Traffic)
- 2070 Projected traffic flows with the Proposed Development (Wind Farm Operations Traffic)
- 2070 Projected traffic flows with the Proposed Development (Wind Farm Decommissioning Traffic)

The results of the analysis show that the R132 / L6274/ L2254 junction will not exceed the 0.85 ratio of flow to capacity (RFC) and will continue to operate with reserve capacity beyond 2070. The ratio of flow to capacity (RFC) is calculated from Junctions 9 PICADY software. An RFC value of 1.0 indicates that the junction is operating at full capacity with a value of 0.85 considered to be the maximum RFC value after which the junction will begin to experience some capacity issues. The results of the analysis are summarised in **Figure 7**, full results from the analysis are included in **Appendix A**.

AM									
	Set ID	Queue (PCU)	95% Queue (PCU)	Delay (s)	RFC	LOS	Junction Delay (s)	Junction LOS	Network Residual Capacity
2023 - Existing Traffic Flows									
Stream B-ACD	D1	0.1	0.6	11.02	0.08	B	3.80	A	146 % [Stream D-ABC]
Stream A-BCD		0.1	0.5	5.64	0.04	A			
Stream D-ABC		0.4	1.7	11.19	0.24	B			
Stream C-ABD		0.0	~1	0.00	0.00	A			
2025 - Forecaet Traffic Flows - Planning Grant									
Stream B-ACD	D2	0.1	0.6	11.26	0.08	B	3.93	A	131 % [Stream D-ABC]
Stream A-BCD		0.1	0.5	5.64	0.04	A			
Stream D-ABC		0.4	1.4	11.58	0.26	B			
Stream C-ABD		0.0	~1	0.00	0.00	A			
2035 - Forecaet Traffic Flows - Planning Period									

Stream B-ACD	D3	0.2	0.6	12.44	0.12	B	4.66	A	69 % [Stream D-ABC]
Stream A-BCD		0.1	0.5	5.59	0.06	A			
Stream D-ABC		0.7	3.2	14.20	0.37	B			
Stream C-ABD		0.0	~1	0.00	0.00	A			
2070 - Forecaet Traffic Flows - Operational Lifespan									
Stream B-ACD	D4	0.3	1.5	15.43	0.18	C	7.14	A	28 % [Stream D-ABC]
Stream A-BCD		0.1	0.9	5.97	0.07	A			
Stream D-ABC		1.3	5.4	20.88	0.51	C			
Stream C-ABD		0.0	~1	0.00	0.00	A			
2035 - Forecaet Traffic Flows - Construction Traffic									
Stream B-ACD	D5	0.2	0.6	12.60	0.12	B	5.65	A	48 % [Stream D-ABC]
Stream A-BCD		0.2	0.9	6.19	0.08	A			
Stream D-ABC		0.9	4.0	16.60	0.44	C			
Stream C-ABD		0.0	~1	0.00	0.00	A			
2070 - Forecaet Traffic Flows - Decomissioning Traffic									
Stream B-ACD	D6	0.3	1.5	15.90	0.18	C	9.89	A	9 % [Stream D-ABC]
Stream A-BCD		0.2	1.0	6.14	0.10	A			
Stream D-ABC		2.1	10.0	27.97	0.63	D			
Stream C-ABD		0.0	~1	0.00	0.00	A			

Table 7 – Traffic Analysis Summary for the R132 / L6274 / L2254 Junction

4.2 Traffic Analysis at the L2275 / L6274 Junction

A traffic analysis of the Proposed Development has been carried out to determine if the junction will operate within capacity for the following scenarios;

- 2023 Baseline traffic counts
- 2025 Projected traffic flows without the Proposed Development (Planning Approval)
- 2035 Projected traffic flows without the Proposed Development (Planning Period / Windfarm Construction)
- 2070 Projected traffic flows without the Proposed Development (Operations Period)
- 2035 Projected traffic flows with the Proposed Development (Wind Farm Construction Traffic)

- 2070 Projected traffic flows with the Proposed Development (Wind Farm Operations Traffic)
- 2070 Projected traffic flows with the Proposed Development (Wind Farm Decommissioning Traffic)

The results of the analysis show that the L2275 / L6274 junction will not exceed the 0.85 ratio of flow to capacity (RFC) and will continue to operate with reserve capacity beyond 2070. The ratio of flow to capacity (RFC) is calculated from Junctions 9 PICADY software. An RFC value of 1.0 indicates that the junction is operating at full capacity with a value of 0.85 considered to be the maximum RFC value after which the junction will begin to experience some capacity issues. The results of the analysis are summarised in **Figure 8**, full results from the analysis are included in **Appendix A**.

		AM							
	Set ID	Queue (PCU)	95% Queue (PCU)	Delay (s)	RFC	LOS	Junction Delay (s)	Junction LOS	Network Residual Capacity
2023 Existing Traffic Flows									
Stream B-AC	D1	0.2	0.6	9.89	0.14	A	3.61	A	313 %
Stream C-AB		0.1	0.5	5.91	0.05	A			
2025 - Forecaet Traffic Flows - Planning Grant									
Stream B-AC	D2	0.2	0.6	10.20	0.15	B	3.75	A	283 %
Stream C-AB		0.1	0.5	5.98	0.05	A			
2035 - Forecaet Traffic Flows - Planning Period									
Stream B-AC	D3	0.3	1.6	11.04	0.21	B	3.98	A	184 %
Stream C-AB		0.1	0.5	5.99	0.08	A			
2070 - Forecaet Traffic Flows - Operational Lifespan									
Stream B-AC	D4	0.6	2.6	14.42	0.31	B	5.11	A	99 %
Stream C-AB		0.1	0.6	6.54	0.09	A			
2035 - Forecaet Traffic Flows - Construction Traffic									
Stream B-AC	D5	0.4	1.8	11.72	0.23	B	4.21	A	161 %
Stream C-AB		0.1	0.5	5.64	0.07	A			
2070 - Forecaet Traffic Flows - Decomissioning Traffic									
Stream B-AC	D6	0.7	3.0	14.94	0.33	B	5.24	A	90 %
Stream C-AB		0.1	0.5	5.84	0.08	A			



Table 8 – Traffic Analysis Summary for the L2275 / L6274 Junction

4.3 Traffic Analysis with Unrelated Consented and Proposed Developments

A traffic assessment was carried out during the construction (2035) and decommissioning (2070) of the the Proposed Development with additional traffic from unrelated planned and consented developments to determine if capacity problems would arise on the road network due to combined traffic volumes in the vicinity of the development. There are currently no major developments planned or consented in the vicinity of the Kellystown Windfarm which would generate significant volumes of new trips on the public road network. In order to test the ability of the road network to cater for additional developments which may coincide with wind farm construction and decommissioning traffic, an analysis has been carried out with a 10% increase in public road traffic in addition to construction and decommissioning traffic to test the capacity of the public road network. The results of the analysis show that the R132 / L6274/ L2254 junction and the L2275 / L6274 junction will not exceed the 0.85 ratio of flow to capacity (RFC) in 2035 or 2070 when wind farm construction / decommissioning traffic is combined with forecast traffic and traffic from future developments. The ratio of flow to capacity (RFC) is calculated from Junctions 9 PICADY software. An RFC value of 1.0 indicates that the junction is operating at full capacity with a value of 0.85 considered to be the maximum RFC value after which the junction will begin to experience some capacity issues. The results of the analysis are included in Appendix A.

4.4 Traffic Analysis for Temporary Traffic Lights

Temporary traffic lights will be required on the R132, L6274 and the L2275 to carry out works on the public road network during the construction of the Proposed Development. The traffic analysis shows that motorists will experience delays of approximately 75 seconds when the temporary traffic lights are installed on the road network. The location and duration of traffic management using temporary traffic lights is detailed in the Traffic Management Plan.

5 SUMMARY

This TMP has been undertaken to outline the management of traffic movements during the construction, operation and decommissioning phases of the Kellystown Wind Farm.

Increased volumes of traffic will be generated by the Proposed Development during the construction and decommissioning periods. Traffic analysis carried out in the Traffic and Transport Assessment (TTA) report for the project shows that traffic generated by the Proposed Development during the construction, operation and decommissioning phases of the Kellystown Wind Farm can be accommodated on the existing public road network.

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APPENDIX A

TRAFFIC ANALYSIS - R132 / L6274 / L2254 Junction

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APPENDIX B

TRAFFIC ANALYSIS – L2275 / L6274 Junction